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Revisiting Standard-Setting Organizations' Patent Policies

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I. INTRODUCTION

¶1 Many industry leaders have difficult decisions to make when it comes to participation in standard-setting organizations (“SSOs”). On one hand, SSO membership offers its participants various incentives such as the ability to keep current with emerging technologies, guide their product development groups toward developing standard-compliant products, and steer their organization’s research efforts in the direction of potential future standardization.¹ On the other hand, when members fail to fully understand or comply with the SSOs’ often ambiguous patent policies, they not only risk forfeiting intellectual property rights in their technology,² but may also face antitrust liability.³

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¹ Benjamin Hershkowitz, *Understanding the Potential Pitfalls Arising from Participation in Standards Bodies*, 4 No. 3 PAT. STRATEGY & MGMT. 1 (2003).

² *Id.*

³ See Richard Raysman et al., *Intellectual Property Licensing: Forms and Analysis* § 6.01(3)(c) (2003)

¶2 Considering these high stakes, the decision of whether to participate in an SSO should invariably include a cost-benefit analysis of the entity's patent portfolio and the potential upside risks of participation in relation to any downside risks involved.⁴ However, the "staggering lack of defining details"⁵ in many SSO patent policies presents a significant barrier to effectively evaluating such risks. Due to the ad hoc nature in which several of these policies were drafted,⁶ important considerations about the policies and procedures governing disclosure of intellectual property, licensing, and voting are often vague and are sometimes not mentioned at all.⁷ As recent litigation of these issues has demonstrated, SSO patent policies must be revisited to ensure the clarification of patent rights upon participation in SSOs and also to encourage increased industry participation so the standards adopted will represent the best of breed technologies that an efficiently operated SSO is capable of producing.

¶3 This hypothetical "efficiently operated SSO" is in everyone's best interest, including industry leaders in a particular technology and other companies that wish to develop and sell products that are compliant with standardized technologies.⁸ However, probably the most significant benefit of increased efficiency and participation in SSOs can be gained by the general consuming public because "[t]he competitive benefits that accrue from establishing standards are well recognized to reside in increased consumer welfare, enhancement of consumer choice and lower production costs."⁹

¶4 This article discusses the current state of industry standards and SSOs in Part II. The legal context for SSOs and their patent policies is presented in Part III. Finally, in Part IV, some potential improvements to SSO patent policies are suggested and analyzed.

II. INDUSTRY STANDARDS AND SSOs

¶5 Although many of us do not realize it, we are surrounded by standardization every day. From simple concepts, such as the electrical outlet, to advanced interfaces that allow our computers to function, modern societies rely on standardized products for both interoperability and increased safety.¹⁰ As one commentator has noted, "[c]ollaborative standard setting is pervasive in the modern economy and increasingly important to healthy competition in numerous industries."¹¹ This section will discuss standards

(discussing patent licensing in relation to SSOs). Although several cases and articles discuss the antitrust implications of participating in SSOs, an in depth antitrust analysis is outside the scope of this article.

⁴ See Don Featherstone & Evan Smith, *Patents That Cover Industry Standards: Companies Risk Losing Patents by Failing to Disclose*, 21 INTELL. PROP. NEWSL. NO. 4, 8 (2003) (noting that "some companies choose to avoid participating in standards committees in areas where they have substantial patent rights").

⁵ *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1102 (Fed. Cir. 2003).

⁶ Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1956 (2002). Professor Lemley's article contains significant empirical analysis of over forty different SSOs and includes an appendix which summarizes the intellectual property policies for each.

⁷ See *Rambus*, 318 F.3d at 1102.

⁸ See David M. Schneck, *Note*, 20 HASTINGS COMM. & ENT. L.J. 641, 642-43 (1998).

⁹ Robert P. Taylor, *Standard Setting: A Growing Morass*, INTELL. PROP. ANTITRUST 2002, at 545, 547 (2002).

¹⁰ This article focuses solely on interoperability standards because safety standards committees are usually able to "design around" any IP rights that may exist, thus negating the problems inherent in interoperability SSOs. See Lemley, *supra* note 6, at 1898.

¹¹ Taylor, *supra* note 9, at 547.

generally, the positive and negative impacts of SSOs, and how SSO patent policies currently regulate participation in these organizations.

A. *Standards Generally and Network Effects*

¶6 The definition of a standard that I have adopted for this article is “any set of technical specifications that either provides or is intended to provide a common design for a product or process.”¹² This broad definition was crafted by Professor Mark Lemley, one of the leading legal authorities on SSOs, and it is appropriate for the purposes of this comment.

1. A Standard Example

¶7 As mentioned above,¹³ a very simple example of a standard is an electrical outlet. The standard for electrical outlets includes specifications describing the voltage, impedance, and plug shape necessary for an electrical outlet to comply with the standard.¹⁴ Because virtually all electrical outlets in the United States conform to these simple specifications, people are assured that when they purchase any electrical device with a standard electrical plug, they will be able to use that product anywhere in the country.¹⁵

¶8 Although this example of a standard is relatively simplistic, it illustrates the importance of standards in today’s economy quite effectively. Try to imagine traveling with a laptop computer if the electrical outlet standard had never been adopted. Most likely, you would need to carry an electrical plug converter with you for every different variation of electrical outlet you may encounter on your trip. Considering the numerous standardized products that each of us use on a daily basis,¹⁶ the value of standardization to the consuming public is quite significant.

2. Standardization and Network Effects

¶9 The significance of standardization becomes even greater when entire networks are connected and standardized. The reason for this is that the value of the entire network increases as more and more users are added to the network.¹⁷ In fact, consumers often benefit more from a standardized product’s interoperability with other similar products than from the product itself.¹⁸ This concept is called a network effect.

¹² Lemley, *supra* note 6, at 1896.

¹³ *See infra* Part II.

¹⁴ Lemley, *supra* note 6, at 1896.

¹⁵ This example illustrates an important point. Although many standards may be considered worldwide standards (e.g. protocols for connecting to the internet), some standards are local to a particular region (e.g., electrical outlets in the United States specify different voltage requirements than in other countries).

¹⁶ For example, most 120V AC electrical devices, telephone services, internet connections or connection services, automobile ignition systems, and light bulbs are all standardized devices or services that we frequently utilize without thinking about the standards upon which they are based. *See* Lemley, *supra* note 6, at 1896.

¹⁷ *Id.* at 1896-97.

¹⁸ *Id.*

¶10 The paradigmatic example of a network effect is one that is familiar to everyone - telephone service. In this particular example, a consumer elicits absolutely no benefit from the network compatible product itself (i.e., the telephone), but the consumer does reap significant benefits from the value of the network when viewed as a whole. Consider, for example, if you were the only person in the world with a telephone. In this extreme case, your telephone would be useless. However, if more and more users were brought online within the network, your telephone's value would rapidly increase.¹⁹

¶11 As this example shows, the intrinsic value of the telephone network system, instead of being tied to the product itself, is proportional to the number of users connected to the system.²⁰ In other words, the true value of the telephone network is best described as the ability of one user to interact with other users on the same network using their standardized network compatible products. Therefore, standardized products in a heavily networked industry are often self-perpetuating. Consumers have an incentive to buy products that are compatible with a widely standardized network because it increases the value of the particular product they have purchased.²¹ Also, firms have an incentive to provide their customers with standardized products because the increased usage of the network creates an ever-expanding potential market for their products.²²

¶12 One of the unique aspects of network effects is that the inherent value of the individual standardized product is often lower than the value of the interconnectedness that the network offers. Therefore, the chosen standard is actually of less importance than the industry's ability to agree on one single standard. Interestingly, this is true whether the chosen standard is indeed the best technological option or not.²³ This may initially seem to undermine any argument that increased membership in SSOs would lead to improved standards, at least in the case of standardization of networked products. However, even SSOs implementing network standards would benefit from increased membership because, as a practical matter, with more technology presented to the SSO, there is greater potential for equally viable but less expensive alternatives to be suggested.²⁴

3. How are Standards Established?

¶13 Standards are generally established in one of three traditional ways: de facto standards may be created by the market, a standard-setting organization may choose a standard, or the government may mandate a certain standard.²⁵ De facto standards are

¹⁹ Jack E. Brown, *Technology Joint Ventures to Set Standards or Define Interfaces*, 61 ANTITRUST L.J. 921, 923 (1993).

²⁰ James C. De Vellis, *Patenting Industry Standards: Balancing the Rights of Patent Holders With the Need for Industry-Wide Standards*, 31 AIPLA Q.J. 301, 306 (2003).

²¹ This phenomenon is generally known as "tipping." Lemley, *supra* note 6, at 1897.

²² De Vellis, *supra* note 20, at 305. See also Schneck, *supra* note 8, at 642-43.

²³ Lemley, *supra* note 6, at 1897.

²⁴ As an example, if an SSO is made up of firms A and B, only those two firms can make suggestions for potential standardized technology. If their two equally adequate alternatives cost \$1000 and \$1200 respectively to implement, the \$1000 solution will be chosen. However, if firm C is now persuaded to join the SSO, there is a chance that it may be able to suggest another viable solution that costs only \$800 to implement. Obviously, if firm C never participates, the \$1000 standard that is chosen will still be valuable, but less so than the \$800 standard.

²⁵ Daniel J. Gifford, *Developing Models for a Coherent Treatment of Standard-Setting Issues Under the Patent, Copyright, and Antitrust Laws*, 43 IDEA 331, 338-39 (2003).

created when, absent any type of agreement or mandate, a significant share of a particular industry's products conform to a given set of characteristics.²⁶ Because these types of standards are not the result of industry agreements or created by an organized group, they do not implicate the same issues as standards promulgated by SSOs²⁷ and are therefore beyond the scope of this article. Similarly, government mandated standards, the number of which are currently decreasing in favor of increased responsibility on the private sector to establish standards, also present different issues than are addressed here.²⁸ Therefore, the analysis contained in this article is confined to those issues that are related to private industry standard-setting organizations.

B. SSOs – Positive and Negative Impacts

¶14 Several different industries and sectors have standards bodies associated with them. Some of the more recognizable SSOs include the World Wide Web Consortium²⁹ (“W3C”), the Institute of Electrical and Electronics Engineers³⁰ (“IEEE”), the Internet Engineering Task Force³¹ (“IETF”), and the American National Standards Institute³² (“ANSI”). “The general goal of standard-setting organizations is to benefit the general public by creating widely adopted industry standards.”³³ When implemented correctly, SSOs are generally able to meet that goal. However, some internal inefficiencies may cause standardization results that are less than ideal.

¶15 The first significant inefficiency is that low participation among industry leaders may hinder technological innovation.³⁴ This inefficiency is particularly problematic and is the subject this article addresses. The lack of participation by industry experts results in a less-informed standards body, which in turn may potentially lead to the adoption of an inadequate³⁵ standard.³⁶ Importantly, industry leaders with the most technological

²⁶ *Id.* at 339-40. “To take just one example, the Microsoft operating systems are clearly de facto standards; no SSO ‘adopted’ them as the preferred or official operating systems, but the market chose Microsoft as the winner of a standards competition.” Lemley, *supra* note 6, at 1899.

²⁷ Lemley, *supra* note 6, at 1899-1900.

²⁸ *Id.* at 1900.

²⁹ “The World Wide Web Consortium (W3C) develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential.” *Worldwide Web Consortium*, at <http://www.w3c.org> (last visited Nov. 18, 2004).

³⁰ “[T]he IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics, among others. Through its technical publishing, conferences and consensus-based standards activities, the IEEE . . . has nearly 900 active standards with 700 under development.” *About the IEEE*, at http://www.ieee.org/portal/index.jsp?pageID=corp_level1&path=about&file=index.xml&xsl=generic.xml (last visited Nov. 18, 2004).

³¹ “The Internet Engineering Task Force (IETF) is a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet. It is open to any interested individual.” *Overview of the IETF*, at <http://www.ietf.org/overview.html> (last visited Nov. 18, 2004).

³² ANSI’s “mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.” *Overview*, at http://www.ansi.org/about_ansi/overview/overview.aspx?menuid=1 (last visited Nov. 18, 2004).

³³ De Vellis, *supra* note 20, at 336. See also S. Bradner, *The Internet Standards Process—Revision Three* (Oct. 1996), at <http://www.ietf.org/rfc/rfc2026.txt> (last visited Nov. 18, 2004).

³⁴ See, e.g., De Vellis, *supra* note 20, at 343-44.

³⁵ The use of the term “inadequate” does not imply that a standard would not necessarily work or would

expertise and with significant patent portfolios in a particular field are those who have the most to lose in terms of patent rights if for some reason they do not adhere to a given patent policy. Therefore, the members that an SSO would most value in terms of their knowledge and expertise are the same entities that are the least likely to participate in SSOs for fear of losing their valuable intellectual property rights.³⁷

¶16 Another potential inefficiency is caused by the terms of some of the SSO patent policies themselves. Many SSOs strongly discourage standards which implicate current IP rights, and some SSOs actually forbid standards that are based on patented technology.³⁸ As a counter-balance, many of the SSOs that discourage but allow standardizing on patented technologies require their members to license the use of that technology on either a royalty-free (“RF”) or a reasonable and non-discriminatory (“RAND”)³⁹ basis.⁴⁰ Those SSOs that forbid patent-based standards disallow standardizing on a patented technology even if that technology would otherwise be

not be beneficial to society. Rather, it is used to demonstrate that, if an SSO were operating with more information, it would have settled on a better standard.

³⁶ “If a standard-setting organization adopts an inferior standard because someone owns a patent on a superior technology and refuses to make it available on RF terms, the standard-setting organization runs a real risk that the chosen standard will not be widely adopted.” De Vellis, *supra* note 20, at 343.

³⁷ See Schneck, *supra* note 8, at 647.

³⁸ See Lemley, *supra* note 6, at 1905-06.

³⁹ Interestingly enough, many patent policies do not explicitly define what is meant by RF or RAND licensing. However, the W3C offers the following definitions:

A RAND License:

“shall mean a license that:

shall be available to all implementers worldwide, whether or not they are W3C Members;

shall extend to all Essential Claims owned or controlled by the licensor and its Affiliates . . . ;

may be limited to implementations of the Recommendation, and to what is required by the Recommendation;

may be conditioned on a grant of a reciprocal RAND License to all Essential Claims owned or controlled by the licensee and its Affiliates. For example, a reciprocal license may be required to be available to all, and a reciprocal license may itself be conditioned on a further reciprocal license from all (including, in the case of a license to a Contribution, the original licensee);

may be conditioned on payment of reasonable, non-discriminatory royalties or fees;

may not impose any further conditions or restrictions on the use of any technology, intellectual property rights, or other restrictions on behavior of the licensee, but may include reasonable, customary terms relating to operation or maintenance of the license relationship such as the following: audit (when relevant to fees), choice of law, and dispute resolution.”

Daniel J. Weitzner, *Current Patent Practice*, W3C Note 24, at <http://www.w3.org/TR/patent-practice> (January 2002) (last visited Dec. 19, 2004).

A RF License:

“shall have the same characteristics as a RAND License, except that a Royalty-Free License:

may not be conditioned on payment of royalties, fees or other consideration except for the conditions permitted in the clauses of RAND License other than clause 5;

may require that all licensees make any Essential Claims they control available to all on a no-royalty basis;

shall not be considered accepted by an implementer who manifests an intent *not* to accept the terms of the Royalty-Free License as offered by the licensor.”

Id.

⁴⁰ While there is a significant amount of literature devoted to RF and RAND licenses, the De Vellis article contains an interesting discussion of why RAND licenses are economically preferable to RF licenses. De Vellis, *supra* note 20.

viewed as the best solution. Therefore, SSOs utilizing this policy will invariably standardize technologies that are less efficient or less technologically advanced.⁴¹ Similarly, for those SSOs that merely discourage patent-based standards, the extra effort in attempting to design around the patented technology is likely to create inefficiencies within the organizational process of choosing and implementing a given standard.

¶17 While these inefficiencies may be present in one form or another in virtually every SSO, an overwhelming majority of commentators still view SSOs as having a positive influence on their particular industries and on society as a whole.⁴² However, although SSOs currently propagate many worthwhile and valuable standards to the consuming public, there is an opportunity for even greater benefit. If SSOs can eliminate or at least limit their inefficiencies, they would significantly improve the likelihood of creating more technologically advanced and cost-effective standards.⁴³

C. SSO Patent Policies

¶18 Many SSO patent policies were initially created as ad hoc agreements⁴⁴ that were modified as problems arose and are, therefore, not particularly well thought-out documents.⁴⁵ Not surprisingly, then, SSO policies often vary significantly, even if the SSOs are in the same or similar industries and the policies share the same goals. Although the policies are very dissimilar in most respects, the unifying issues that are critical to understanding a given SSO's stance on IP include (1) whether the policy covers patents, trademarks, copyrights, or any combination, (2) whether and what type of disclosure of IP is required, (3) whether a search for IP is required, (4) whether the standards body can adopt a standard that relies on IP, and (5) what licensing provisions are required amongst members and to outsiders.⁴⁶

¶19 Because the majority of litigation in this area has involved patent rights rather than trademarks or copyrights, this article focuses primarily on the patent policies of SSOs. In addition, this article is limited to SSOs with IP disclosure requirements because, if there is no duty to disclose IP, a participant's IP rights are not put at any risk. However, the remaining issues require further examination.

¶20 According to Lemley's empirical study, the majority of SSOs require IP disclosure of some sort.⁴⁷ When applicable, the types of disclosures required can be broken into two categories: (1) issued patents only or (2) issued patents and applications pending in the Patent and Trademark Office. Also, according to the statements in the policies, most of the SSOs do not require participating members to search their own patent portfolios to determine disclosure, but rather the participants may rely on the member's reasonable beliefs.⁴⁸ While SSOs often discourage selecting a standard that implicates patented

⁴¹ *Id.* at 341-43.

⁴² *See generally* Lemley, *supra* note 6. *See also* Brown, *supra* note 19.

⁴³ *See* De Vellis, *supra* note 20.

⁴⁴ *See infra* Part I; *see also* Lemley, *supra* note 6, at 1956.

⁴⁵ *Id.*

⁴⁶ *Id.* at 1973. Professor Lemley uses these five distinguishing factors to demonstrate the differences in the SSO IP policies included in his empirical study.

⁴⁷ *Id.* at 1904.

⁴⁸ *Id.* at 1905.

technology, many of the SSOs allow such standards to be adopted.⁴⁹ However, most of the SSOs that allow standards based on patents also require the patent holder to offer RAND licenses to the other members of the SSO⁵⁰ and sometimes even to non-members.⁵¹

¶21 Another finding of Lemley's study was that many firms that participate in SSOs join multiple organizations.⁵² The importance of this finding is that, with such disparity in the patent policies of different SSOs, "it is very difficult for IP owners to know *ex ante* what rules will govern their rights."⁵³ Also, to fully understand the implications of joining any new SSO, companies must thoroughly investigate the bylaws of that SSO.⁵⁴ As a practical matter, Lemley notes that many companies are unlikely to conduct these preliminary investigations, and therefore, they are "unlikely to be fully informed about their IP position."⁵⁵ This is especially true when, as in most corporate decisions to join SSOs, IP attorneys are very rarely consulted.⁵⁶ As will later be shown,⁵⁷ these uninformed positions have often led to legal problems for members who have failed to comply with the SSO patent policies.

III. SSOs IN THE LEGAL CONTEXT

¶22 Several legal issues are raised by a firm's decision to participate in an SSO. For instance, SSO members face risks of seriously endangering their patent rights by disclosing their IP too early, thus beginning the one year countdown for patent application filing deadlines,⁵⁸ and potentially allowing the standards committee to design around their IP rights.⁵⁹ However, by disclosing patent rights too late or not at all, the participant may subject him or herself to legal action brought by the SSO itself, by other members of the SSO, or even by the Federal Trade Commission.⁶⁰ In addition, because SSOs often involve groups of industry competitors who collaborate to create standards, antitrust issues may occasionally arise.

⁴⁹ *Id.*

⁵⁰ *Id.* at 1906.

⁵¹ Although only two of the SSOs studied explicitly included language requiring RAND licensing to everyone, it is not clear that the other SSOs intended their policies to include licenses only for their members. *Id.*

⁵² As an example, "in 1998 Sun Microsystems participated in eighty-seven different SSOs." *Id.* at 1907.

⁵³ *Id.* at 1906-07.

⁵⁴ This investigation must include an examination of the duty of disclosure as well as the duty of licensing. Full comprehension of the duty of disclosure requires a thorough understanding of the following factors: (1) when required disclosure begins; (2) when required disclosure ends; (3) to whom the duty of disclosure applies; (4) how to disclose; (5) when to disclose; (6) what to disclose; (7) what IP rights to disclose; (8) what duties of searching are required; and (9) what the scope of the standard is so that the firm can determine whether or not its patent rights are implicated. Laura Majerus & Robin Reasoner, *Participation in Standard-Setting Organizations*, 4 NO. 6 PAT. STRATEGY & MGMT. 1 (2003).

⁵⁵ Lemley, *supra* note 6, at 1907.

⁵⁶ *Id.*

⁵⁷ *See infra* Part III.B.

⁵⁸ Hershkowitz, *supra* note 1; *see also* 35 U.S.C. § 102(b) (2000).

⁵⁹ Hershkowitz, *supra* note 1.

⁶⁰ *See, e.g., In re Dell Computer Corp.*, 121 F.T.C. 616 (1996).

A. SSOs and Potential Antitrust Concerns

¶23 While SSOs may facially resemble collusion among groups of competitors in a particular industry, antitrust concerns have been relatively minimal in the context of standard setting.⁶¹ It is true that SSOs have the power to create agreements between horizontal competitors that could “raise prices, reduce output or otherwise diminish competitive options.”⁶² However, in general, antitrust liabilities under the Sherman Act⁶³ do not attach to otherwise legitimate SSO activities.⁶⁴

¶24 One of the main reasons courts are hesitant to condemn such cooperative activities, even among horizontal competitors, is that they have recognized and accepted the overall public benefit created by standards.⁶⁵ This is not to say that SSOs should be exempted automatically from antitrust scrutiny, but when they are operated legitimately,⁶⁶ the courts have generally found SSO activities to be consistent with antitrust goals.⁶⁷ In fact, most legitimate SSOs even foster competition among competitors.⁶⁸ It is unlikely that any of the suggested SSO patent policy alternatives contained within this article raise additional antitrust concerns. Therefore, SSOs will not be prone to any increased scrutiny upon their implementation.

B. Legal Doctrines Utilized in Evaluating SSO Member Conduct

¶25 Although the defendants’ actions in many of the alleged SSO misconduct cases may seem facially wrongful, the main difficulty courts have had in assessing the allegations is finding an appropriate doctrine under which to analyze the cases. This is because SSO membership, on its own, does not fit neatly into a classical legal framework. Therefore, courts have applied legal doctrines such as equitable estoppel,⁶⁹ implied licensing,⁷⁰ antitrust,⁷¹ and fraud⁷² to attach liability to the actions of SSO participants’ misconduct.

¶26 In one of the earliest actions involving misconduct by an SSO member, *Stambler v. Diebold*, the court applied the doctrine of equitable estoppel to prevent Stambler from profiting by remaining silent as a member of an SSO which was contemplating a standard that implicated his patent rights.⁷³ Even though the SSO did not have a policy that

⁶¹ See Brown, *supra* note 19, at 931.

⁶² *Id.* at 925.

⁶³ 15 U.S.C. §§ 1-7 (2000).

⁶⁴ Brown, *supra* note 19, at 925.

⁶⁵ *Id.* at 925-26.

⁶⁶ As an example of an SSO operating illegitimately, the Supreme Court affirmed a violation of the Sherman Act when it was found that over 200 participants were recruited to join an SSO and were instructed how to vote on a particular standard. *Id.* at 927-28 (citing *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492 (1988)).

⁶⁷ Brown, *supra* note 19, at 925.

⁶⁸ Wynee Carvill & Khurshid Khoja, *Antitrust Issues Presented in Setting Interoperability Standards*, INTELL. PROP. ANTITRUST 2003 279 (2003).

⁶⁹ See, e.g., *Stambler v. Diebold, Inc.*, 11 U.S.P.Q.2d (BNA), 1709 (E.D.N.Y. 1988), *aff’d*, 878 F.2d 1445 (Fed. Cir. 1989) (unpublished).

⁷⁰ See, e.g., *Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc.*, 103 F.3d 1571 (Fed. Cir. 1997).

⁷¹ See, e.g., *In re Dell Computer Corp.*, 121 F.T.C. 616 (1996).

⁷² See, e.g., *Rambus Inc.*, 318 F.3d at 1084.

⁷³ *Stambler*, 11 U.S.P.Q.2d at 1714-15.

explicitly required disclosure, because Stambler knew that the SSO was considering his patented technology for standardization and subsequently left the SSO without informing them of his patent, the court ruled that he had a duty to speak.⁷⁴ In light of this duty to speak, Stambler's silence was found to be affirmatively misleading to the SSO, and he was therefore estopped from asserting patent infringement claims against Diebold.⁷⁵

¶27 In *Wang Laboratories v. Mitsubishi Electronics America*,⁷⁶ the two parties were both members of the Joint Electron Device Engineering Council⁷⁷ ("JEDEC"). Mitsubishi accused Wang of misleading JEDEC by concealing a pending patent application that would be implicated by the Single In-Line Memory Modules ("SIMM") standard that was being contemplated.⁷⁸ The Federal Circuit upheld a finding that, although equitable estoppel did not apply, Wang had granted Mitsubishi an implied license to use its patented technology based on the exchange of technical information, the two having worked together in joint development efforts, and other significant dealings between the two companies.⁷⁹ Because a finding of equitable estoppel did not apply, however, Wang was still permitted to continue asserting its patent rights against others.⁸⁰

¶28 In 1995, the Federal Trade Commission challenged Dell's allegedly wrongful activities while it was a member of the Video Electronic Standards Association ("VESA") under a theory of antitrust.⁸¹ According to the FTC's complaint, Dell representatives sat as members at meetings of VESA's Local Bus ("VL-bus") Committee, which approved the VL-bus standard.⁸² Following committee approval, the VL-bus standard was brought before the entire voting membership of VESA, and a Dell representative voted in favor of approving the standard. As part of the voting process, the representative also certified that, to the best of his knowledge, the proposal would not infringe on any of Dell's IP rights.⁸³ Eight months after the standard was adopted, and following its widespread use in over 1.4 million computers, Dell claimed that implementing the VL-bus standard violated Dell's patent rights.⁸⁴ Although the facts pertaining to Dell's actual participation in VESA and its required IP disclosures were somewhat unclear and were never litigated, Dell settled by way of a consent decree that estopped Dell from asserting its patent rights against the VL-Bus technology for a period of ten years.⁸⁵

¶29 The most recent case alleging violations of an SSO patent policy also involved participants of the JEDEC⁸⁶ standards body. In *Rambus*, a jury found that Rambus had committed fraud on the SSO by failing to disclose pending patent applications to the

⁷⁴ *Id.* at 1715.

⁷⁵ *Id.*

⁷⁶ *Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc.*, 103 F.3d 1571 (Fed. Cir. 1997).

⁷⁷ This SSO is now known as the JEDEC Solid State Technology Association, which is a "semiconductor engineering standardization body of the Electronic Industries Alliance." *About JEDEC*, available at http://www.jedec.org/Home/about_jedec.cfm (last visited Nov. 30, 2003).

⁷⁸ *Wang*, 103 F.3d at 1573-77.

⁷⁹ *Id.* at 1579-82.

⁸⁰ See Taylor, *supra* note 9, at 562-63.

⁸¹ *In re Dell Computer Corp.*, 121 F.T.C. 616 (1996).

⁸² *Id.* at 617.

⁸³ *Id.*

⁸⁴ *Id.* at 617-18.

⁸⁵ *Id.* at 619-23. See also Taylor, *supra* note 9, at 552-53.

⁸⁶ See *supra* note 77 and accompanying text.

standards body.⁸⁷ While the JEDEC policy clearly requires disclosure of *issued patents* with claims that directly read on to a proposed standard,⁸⁸ the policy is much less clear as to whether disclosure of *patent applications* are required.⁸⁹ In reversing the district court’s ruling of fraud, the Federal Circuit stated that the JEDEC policy demonstrated a “staggering lack of defining details” and noted that, “[w]hen direct competitors participate in an open standards committee, their work necessitates a written patent policy with clear guidance on the committee’s intellectual property position.”⁹⁰ The court further declared that “[a] policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary for a fraud verdict.”⁹¹ Although JEDEC subsequently filed an amicus brief with the Supreme Court in support of Infineon’s position and claiming that the majority opinion in *Rambus* had essentially rendered its patent policy ineffective and unworkable,⁹² the Federal Circuit correctly noted that it was the JEDEC patent policy itself that was ineffective and unworkable.⁹³ Infineon’s petition for certiorari was recently denied by the Supreme Court.⁹⁴

IV. REVISITING SSO PATENT POLICIES

¶30 As evidenced by the previous discussion of the problems with current SSO patent policies⁹⁵ and the recent litigation involving them,⁹⁶ it seems apparent that some changes are necessary to prevent further lawsuits and generally improve the standard-setting process itself. This section first discusses some minor modifications that would improve the enforceability and predictability of these policies. Next, three forward-looking alternatives with greater potential for increased SSO membership and efficiency are presented. These alternatives would require increased implementation efforts and require considerable thought by individual SSOs to determine whether one or more of the alternatives would fit within their particular framework.

A. “Fine-Tuning” Current SSO Patent Policies

¶31 As previously mentioned, courts have applied traditional legal doctrines such as contract, estoppel, fraud, and antitrust to analyze whether allegedly wrongful behavior by one or more SSO participants is legally unjust.⁹⁷ However, the courts have been hesitant

⁸⁷ *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1084 (Fed. Cir. 2003).

⁸⁸ If patent claims directly read on to a proposed standard, the standard cannot be practiced without infringing the patent claims. *Id.* at 1102-03.

⁸⁹ There was also some question as to whether JEDEC members were adequately informed of their disclosure obligations throughout the standardization process, but the court did not need to reach this issue. *Id.* at 1096-1102.

⁹⁰ *Id.* at 1102.

⁹¹ *Id.*

⁹² Brief of Amicus Curiae JEDEC Solid State Technology Association in Support of Petitioners, 2003 WL 22428462, at *3 (Aug. 6, 2003), *Infineon Techs. AG v. Rambus, Inc.*, 124 S.Ct. 227 (2003) (No. 03-37).

⁹³ See *Rambus Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1102 (Fed. Cir. 2003).

⁹⁴ *Infineon Techs. AG v. Rambus, Inc.*, 124 S.Ct. 227 (2003).

⁹⁵ See *infra* Parts II.B-C.

⁹⁶ See *infra* Part III.B.

⁹⁷ See *infra* Part III.

to attach liability when the SSO patent policies are too ambiguous or vague. As the Federal Circuit decision in *Rambus* points out, “after-the-fact morphing of a vague, loosely defined policy to capture actions not within the actual scope of that policy” would likely chill participation in SSOs just as much as a lack of compliance with well-defined patent policies.⁹⁸ The court implies that, if SSOs could create well-defined patent policies and courts are allowed to enforce these policies more effectively, industry participation would increase due to a clearer understanding of the potential risks involved and a better idea of how to avoid such risks.

¶32 With these guidelines in mind, there are a few things SSOs can do to “fine-tune” their current patent policies that will render them more definite and legally enforceable. On an individual basis, SSOs should first examine their written patent policies to determine what revisions, if any, are necessary. Initially, they should determine whether the who, what, when, and how questions have been answered in terms of IP disclosure, licensing, and voting practices.⁹⁹ Next, the SSOs should more thoroughly examine each of these issues to ensure clarity and specificity. While not strictly necessary, the policies should also include considerations such as who owes a duty to whom and when this duty attaches, who will decide the terms of a RAND license and whether these decisions are subject to any limitations, and what arbitration proceedings are in place for its members to easily resolve potential disputes.¹⁰⁰

¶33 The next step requires the SSOs to ensure that its members are sufficiently aware of its patent policies.¹⁰¹ Although it may be possible to argue that the obligations expressed in the SSO bylaws should be imposed implicitly on its members just by joining the organization,¹⁰² a better solution would be to require each member to read and sign the patent policies upon joining the SSO and any time the policy is revised. A further improvement on this idea would be to require the signature of a firm’s in-house counsel certifying that the firm agrees to abide by the SSO’s patent policies.¹⁰³

¶34 Undertaking these seemingly simple tasks would have prevented much of the litigation mentioned above. While these changes would not immediately improve the efficiency of SSOs, the long term effect would be that each existing and potential member and potential member would have a better understanding of its IP rights upon membership. This would not only provide the benefit of decreased litigation, but it would also encourage increased membership because the risks and rewards of participation could be more adequately analyzed.

B. More Dramatic Approaches

¶35 Although all SSOs would be well-served by “fine tuning” their current patent policies, the following three alternatives offer a paradigm shift from the way SSO patent

⁹⁸ *Rambus*, 318 F.3d at 1102 n.10. See also Schneck, *supra* note 8, at 647 (arguing that SSO members will only participate “if the integrity of the standard-setting process is secure”).

⁹⁹ See *Rambus*, 318 F.3d at 1102 (ruling that, if a patent policy does not clearly and explicitly define its stance on these issues, it is not enforceable).

¹⁰⁰ See Hershkowitz, *supra* note 1.

¹⁰¹ See Schneck, *supra* note 8, at 661.

¹⁰² *Id.*

¹⁰³ See Featherstone & Smith, *supra* note 4, at 8 (suggesting the importance of obtaining legal counsel and informing them of a firm’s proposed membership in SSOs).

policies are currently implemented. While any one or more of the following options may add considerable value to a particular SSO, a thorough evaluation of each option must be made by the SSOs on an individual basis to determine its potential effectiveness within that SSO's objectives.¹⁰⁴

1. Standardizing the Patent Policy Framework

¶36 The first alternative is the least dramatic of the three and involves a standardization of the SSO patent policy framework itself by creating a standard set of rules and options that are clearly and concisely defined. Although at first glance this option would seem to fit squarely within the purview of the SSOs themselves, this standardized taxonomy would likely have to be created by an external source.¹⁰⁵ Ideally, a dream team of experienced patent attorneys who are conversant in SSO membership terms would form a sort of SSO of their own to create a set of basic standards to which all SSOs should conform. While it is impossible to create a single set of rules that incorporates the goals and objectives of every SSO,¹⁰⁶ there are certainly basic criteria¹⁰⁷ and options that could be standardized.

¶37 For example, although not all SSOs require their members to disclose IP, those that do should have standardized language that details what types of IP must be disclosed and when the IP must be disclosed. Obviously, there are different options within each of these categories. In terms of the types of IP that must be disclosed, the policy should specify whether it covers patents, copyrights, trademarks or any combination of the three. The policy should also say explicitly if it covers pending applications or only issued patents.

¶38 By clearly specifying these types of issues in a standardized taxonomy across different SSOs, members can more easily become aware of what is expected from their participation in any particular SSO, thus lowering participation barriers.¹⁰⁸ If a member violates these expectations, it would be subject to examination by a procedure that could also be clearly defined in the policy. By standardizing the language and format of SSO policies such that any member of an SSO can easily compare which rules are the same or different than in any other given SSO, members would be able to join multiple SSOs with fewer concerns about losing their IP rights due to non-compliance.

¶39 In addition, a standardized framework would allow more efficient adjudication by the courts in the case of any alleged misconduct. While the courts currently have to examine both the factual situation of how a defendant acted and the legal concepts of what duties are imposed by the often ambiguous patent policies, a standardized framework would include what duties are imposed on the SSO participants and when and

¹⁰⁴ See Alden F. Abbott & Theodore A. Gebhard, *Standard-Setting Disclosure Policies: Evaluating Antitrust Concerns in Light of Rambus*, 16-SUM ANTITRUST 29, 34 (2002) (emphasizing that there are no "one size fits all" policies).

¹⁰⁵ The reason for this is simply the difficulty a current SSO would have in looking outside the group to determine what types of best practices already exist.

¹⁰⁶ See *supra* note 104 and accompanying text.

¹⁰⁷ See *infra* Part II.C.

¹⁰⁸ The strength of this conclusion is contingent on a significant number of SSOs choosing to conform their patent policies to a standardized format and taxonomy. However, lesser conformance will still provide some of the benefits of cross-SSO participation and efficient judicial economy discussed in this section.

under what circumstances those duties attach. Since the rules would be clearly defined, the parties are more likely to settle their differences out of court to avoid the costs of litigation. Also, even if the dispute progressed to trial, the main issues would be factual rather than legal.

¶40 After the admittedly complicated task of creating such a standardized framework, the most imposing barrier to implementing this framework would be convincing the SSOs to change their policies. Most members of SSOs never have to face litigation involving standardization, and therefore, individual SSOs are likely to resist “fixing” what, to them, is not broken. However, if the model SSO policies are both broad enough to cover the wide range of options currently implemented and specific enough to allow plug-and-play choices by SSOs as to which options they want in their policies, there should be little resistance to such a change. After all, it would limit their members’ risks associated with joining and would not create an overly onerous burden to implement.

2. Screening Procedures

¶41 Another possibility for improving industry participation in SSOs is to offer membership with less risk of losing patent rights by having the individual participants “screened” from any research and development teams that are working on the types of technology being standardized. This procedure would be very similar to legal ethics rules which allow attorneys in a law firm to work on matters which would otherwise create a conflict of interest.

¶42 Though this is a relatively novel approach, the dissenting statement of Commissioner Azcuenaga in the *Dell* case seems to support such a procedure.¹⁰⁹ In particular, the commissioner was troubled by the fact that vicarious knowledge transfer in a corporation as large as Dell “would place [Dell’s] intellectual property at risk simply by participating in the standards-setting process.”¹¹⁰ The commissioner further explained that, if VESA’s intent was to impute an entire organization’s knowledge to its representative attending the SSO meetings, VESA could have made this clear in its patent policy, but it did not.¹¹¹ She also suggested that there was likely a good reason for not explicitly including this language in the policy. Namely, if that language had been included, the voting process “likely would have been quite prolonged and, perhaps, even impossible.”¹¹²

¶43 Rule 1.0(k) of the American Bar Association’s Model Rules of Professional Conduct defines its screening process as “the isolation of a lawyer from any participation in a matter through the timely imposition of procedures within a firm that are reasonably adequate under the circumstances to protect information that the isolated lawyer is

¹⁰⁹ See *In re Dell Computer Corp.*, 121 F.T.C. 616, 630 (1996) (dissenting statement of Comm’r Mary L. Azcuenaga).

¹¹⁰ *Id.* Commissioner Azcuenaga also cites commentary by other SSOs weighing in on the prospect of vicarious knowledge transfer and notes that, “[f]or firms with hundreds of employees involved in standards-setting and with tens of thousands of patents, an affirmative obligation to search for patents would present the choice of either avoiding standards-setting or placing their intellectual property at risk.” *Id.* at 635-36.

¹¹¹ *Id.* at 630.

¹¹² *Id.*

obligated to protect under these Rules or other law.”¹¹³ One of the comments following the rule offers useful insight into how the drafting board envisioned screening procedures being set up to avoid such conflicts:

The specific screening measures that are appropriate for any particular matter will depend on the circumstances but should provide reasonable assurance that there will be no significant risk to any information that the disqualified lawyer is obligated to protect. Where appropriate, such procedures could include a written undertaking by the screened lawyer to avoid any communication with other firm personnel and any contact with any firm files or other materials relating to the matter, written notice and instructions to all other firm personnel forbidding any communication with the screened lawyer relating to the matter, denial of access by the screened lawyer to firm files or other materials relating to the matter and periodic reminders of the screen to the screened lawyer and other firm personnel.¹¹⁴

¶44 This language offers the starting point for the analogous SSO screening procedures suggested below.

¶45 The important elements that should be adopted by an SSO screening procedure are that the screening must occur prior to any participation in the SSO, and the screening must be reasonably adequate to protect against the participant’s interaction with both the research team members and any corporate information about the research in that particular technology. While the individual SSOs may decide what types of written agreements are necessary to fulfill the “reasonably adequate protection” element, they should spend enough time on the agreements to make them detailed and specific enough that the corporate members can understand exactly what is expected of them. Further, they must be written clearly enough so that the courts will be able to enforce the agreements in the case of any potential conflicts.¹¹⁵

¶46 One concern with the implementation of such screening procedures is that engineers and researchers are not legally bound by a code of ethics as are lawyers.¹¹⁶ However, by requiring written contracts of each individual purporting to be screened from his or her corporate peers, courts should be able to enforce these rules much as they have enforced SSO patent policies under contractual theories in the past. While the proof of such misconduct may seem daunting or even impossible at first glance, bear in mind that the same investigatory and evidentiary problems with proving lawyer misconduct within a firm is at least equally as challenging. Also, the SSOs could include language in the contracts such that, if a company’s IP is implicated in a standard that was suggested or voted upon by its “screened” representative without disclosure of that IP, the behavior becomes presumptively wrongful.

¹¹³ MODEL RULES OF PROF’L CONDUCT R. 1.0(k) (2002).

¹¹⁴ *Id.* cmt. 9.

¹¹⁵ These agreements could also follow a standardized format and taxonomy to ensure clarity and enforceability. *See infra* Part IV.B.1.

¹¹⁶ *See* MODEL RULES OF PROF’L CONDUCT Preamble (2002).

¶47 Importantly, and analogous to screening procedures for lawyers, this presumption that the “screened” representative has wrongfully violated the terms of the screening agreement must be rebuttable.¹¹⁷ In an instance where a screened SSO representative is presumed to have violated the screening agreement, the presumption could be rebutted by evidence that proves the establishment of timely screening procedures that were carefully constructed and followed.¹¹⁸ However, by taking this logical step of allowing an SSO to presumptively prove misconduct by one of its members, the added incentive for corporations to participate is somewhat limited because of the prospectively difficult rebuttal process, even if the firm followed strict guidelines in creating the screening procedures.

¶48 Assuming that an SSO decided that the evidentiary concerns were outweighed by the benefits of additional participation, another important issue to resolve is how close to a particular technology an individual must be to be precluded from participating. In the interests of having the most knowledgeable individuals involved in the standard-setting process, the SSO would want to include people who are intimately familiar with the technologies being examined without actually having worked as a member of the research and development team developing those technologies. Again, however the SSO chooses to draw that line, it must be clearly defined in the patent policy for it to be effective.

3. Different Member Classes

¶49 Under most current SSO policies, there are only two classes of entities: members and non-members. This rather simplistic classification only allows for different licensing arrangements between members and non-members if the SSO so chooses. An alternative to this approach is to add a third class: non-voting members.¹¹⁹ This non-voting class would allow broader participation in standardization meetings, thereby increasing the overall knowledge base of the group, but the members who decline to disclose their IP to the group would not be allowed to vote for or against a given standard.¹²⁰ In return, the non-voting members would not be required to disclose their current and pending patent rights to the group, and would therefore not risk losing those rights.

¶50 As an initial matter, these non-voting members would have to declare their interests and intentions from the beginning of discussions about a particular standard. Accordingly, the voting members would know who the non-voting members are at the

¹¹⁷ See *Cromley v. Board of Education of Lockport Township High School District 205*, 17 F.3d 1059, 1066 (7th Cir. 1994) (holding that a presumption of shared confidences in the legal screening procedure context is rebuttable). If the presumption was non-rebuttable, the benefits mentioned in this section would not apply because the “new” system would be identical to the current system of strict liability for vicarious enterprise knowledge.

¹¹⁸ See *Amuro Confections Co. v. Morris Nat., Inc.*, No. 03-C-1264, 2003 WL 21321344, at *4 (N.D. Ill. June 5, 2003) (finding that a law firm had successfully rebutted a presumption of shared confidences by a showing of “carefully constructed safeguards”).

¹¹⁹ There are currently some SSOs that allow both voting and non-voting members. See *Carvill & Khoja*, *supra* note 68, at 289.

¹²⁰ Although any restriction on voting privileges may result in a “specter of collusion,” if the members themselves have opted for a lower level of participation, it is unlikely that any antitrust concerns would arise. See *id.*

outset, and should likely consider the non-voting members' input as at least potentially biased towards that member's own IP rights.

¶51 The advantages of this system include increased participation in SSOs and increased technological options presented to the voting body. By appreciably limiting the risk of a firm losing its IP rights upon participation in the standard-setting process, there is less of a barrier to becoming involved in SSOs. Therefore, many industry leaders who had previously chosen not to become members based upon a risk of losing their IP rights would likely participate as non-voting members if only to showcase their current IP to the SSO voting committee. However, once they have begun participating, they would also likely attempt to point out any perceived weaknesses and shortcomings in other offered technologies, whether those ideas were offered by other non-voting competitors or by voting members who were attempting to design around certain IP rights.¹²¹ This increased participation would invariably lead to a greater knowledge base with which to judge and offer suggestions for future standards.

¶52 Even in the unlikely event that the non-voting members only participate to the extent they would have to in order to promote and advertise technologies which implicated their IP rights, the SSOs would still benefit because they would have more available options from which to choose. Currently, most standards bodies are limited to choosing among known IP and ideas from members.¹²² Although SSOs often eschew standards based on patented technology, there are often reasons for choosing such a standard.¹²³ If the SSO has carefully considered all of the available options before it, including public domain solutions, and still chooses to adopt a standard based on patented technology, that technology must truly represent the best embodiment of what the SSO set out to standardize. Theoretically, this analysis must consider the increased costs of production that are associated with having to license the technology from the patent owner. However, SSOs are currently undertaking such a cost-benefit analysis every time they consider patented technologies for standardization, so this option would not significantly increase the procedural costs of SSOs in making their decisions. Rather, the increase in highly-qualified candidates for standardization should allow the dismissal of lesser candidates more easily than if there were fewer standards options.

¶53 The possible problems with this system are ones that already exist in the current SSO policies. A non-voting entity may decide that, by disclosing its preferences in technology to the SSO, the SSO would automatically presume that the firm has or will have IP rights in those preferences, and the SSO would thus attempt to design around those particular preferences. Operating under this assumption, a firm may decide not to participate in the meetings at all in the hopes that the SSO will potentially define a standard that implicates the firm's patented technology. However, the SSO is no worse off with the firm not participating for that reason than for the reason of potentially losing its IP rights.

¹²¹ Through intensified challenging of proffered technologies, a more complete examination of the strengths and weaknesses of the technology candidates is achieved.

¹²² See *supra* note 24 and accompanying text.

¹²³ See Schneek, *supra* note 8, at 647 (stating that SSOs may standardize on a patented technology if it is superior to any other technologies).

V. CONCLUSION

¶54 As recent litigation has shown, SSO patent policies are often legally unenforceable due to their ambiguous nature or procedural loopholes. Thus, as an initial matter, SSOs should at the very least reexamine their policies and clarify the who, what, when, and how of participant IP disclosure, licensing, and voting requirements. Also, the SSOs must implement and follow procedures that ensure that each participant is aware of the terms of the patent policy and has agreed to abide by them. These “fine-tuning” efforts by themselves would likely lead to somewhat increased participation by industry leaders, but their effect is likely to be minimal in relation to more significant modifications of the SSO policies. Therefore, more dramatic changes such as the creation of standardized SSO patent policy frameworks, screening procedures, and the allowance of different member classes should also be examined as potential alternatives to the current paradigm.